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REMARKS

Claims 2-29 and 32-47 are pending in the application. Claims 39-47 are newly added. Claims 2-13, 16-19, 21-24, 29-34, 36 and 38 are rejected. Claims 15, 20, 35 and 37 have been allowed. Claims 14 and 25-28 have been objected to. Favorable reconsideration is respectfully requested.

Claims 2-12, 14, 17, 18, 19, 21-23, 25-29, 32 and 33 were objected to as allegedly containing informalities. Withdrawal of this objection is respectfully requested. The amendment to the claims proposed in the Office Action appears to be a matter of discretion. The undersigned is not aware of any formal requirement along the lines proposed. The language "according to claim ____" adequately signals a dependent claim. See, e.g., MPEP 608.01(n).

Claims 5 and 32 were rejected under 35 USC 102(b) as being anticipated by Brooks (US 5,533,795). To anticipate a claim under § 102, a single prior art reference must identically disclose each and every claim element. See Lindeman Maschinenfabrik v. American Hoist and Derrick, 730 F.2d 1452, 1458 (Fed. Cir. 1984). If any claimed element is absent from a prior art reference, it cannot anticipate the claim. See Rowe v. Dror, 112 F.3d 473, 478 (Fed. Cir. 1997). Accordingly, Brooks does not anticipate the invention as recited in claim 5 for at least the reason that Brooks does not disclose a switching device including a plurality of switches which are connected in series with each other and which are turned on in response to the operation of a brake operating member that is common to the plurality of switches, as required by claim 5.

Instead, in Brooks, while switches 18 and 24, and 18 and 26, are in series with each other, they are not turned on in response to the operation of a common brake operation member. Rather, switch 18 is responsive to an ignition switch, while switch 24 is responsive to pressure on a seat. Similarly, switch 26 is responsive to a door being opened or closed, and not to a member common to both switch 26 and switch 18. By contrast, as shown in the embodiment of Fig. 2 of the present application, switches 96a, 98a, and 96b, 98b are responsive to a common brake operating member 38 (see, e.g., the present specification at page 42, lines 18-21). Claim 5, and claim 32 dependent thereon, is therefore

allowable over Brooks. Withdrawal of the rejection of claims 5 and 32 as anticipated by Brooks is accordingly respectfully requested.

Claims 13, 16, 17, 24, 34, 36 and 38 were rejected under 35 USC 102(b) as being anticipated by Giorgiatti et al. (Giorgiatti) (US 5,294,191). However, Giorgiatti does not anticipate independent 13 and 16 claims for at least the reason that Giorgiatti does not disclose a switching device disposed between an electrically controlled brake and a plurality of electric power sources, wherein the plurality of electric power sources are arranged to supply electric energies to the electrically controlled brake independently of each other, as required by claims 13 and 16.

The Office Action appears to assert (Office Action, paragraph 4) that the electronic control centers 13, 13 of Giorgiatti correspond to the claimed electric power sources, and that electric motors 17, 17 of Giorgiatti correspond to the claimed front brake control device or front brake actuator recited in claims 13 and 16, respectively. However, in addition to there being no disclosure of the claimed switching device disposed therebetween, the noted elements of Giorgiatti have a completely different functional relationship from the alleged equivalents of the rejected claims. Concerning a relationship between elements 13, 13 and 17, 17 of Giorgiatti, it is only disclosed that "the control centers 13, 13 start up the electric motors 17, 17 as brakes ... proportionally to the signal output by the pressure transducer 12" (col, 3, lines 33-36). That is, Giorgiatti does not disclose that elements 13, 13 are arranged to supply electric energy to elements 17, 17. Accordingly, claims 13 and 16, and claims 17, 34 and 36 dependent thereon, are allowable over Giorgiatti.

The Office Action does not appear to explicitly draw any parallels between the disclosure of Giorgiatti and the elements of rejected claim 24. However, Giorgiatti clearly fails to anticipate the invention of claim 24 in a number of respects. For example, Giorgiatti fails to disclose at least an electric circuit as required in claim 24, i.e., an electric circuit in which an actuator and a brake control apparatus are connected to an electric power device in parallel with each other, and wherein a switching device is disposed in a common portion of the

electric circuit which serves to connect the electric power source device to both of the actuator and the brake control apparatus. Accordingly, claim 24 and claim 38 dependent thereon are allowable over Giorgiatti.

In view of the above, withdrawal of the rejection of claims 13, 16, 17, 24, 34, 36 and 38 as anticipated by Giorgiatti is respectfully requested.

Claims 2 and 19 were rejected under 35 USC 103(a) as being unpatentable over Brooks (US 5,533,795) in view of European Patent to Maron et al. (Maron) (corresponding to US 5,957,551). To establish a prima facie case of obviousness under § 103, all claim limitations of a claimed invention must be taught or suggested by the prior art. See MPEP, § 2143.03 and *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). In view of the foregoing authority, the cited references fail to support the asserted rejection.

Claims 2 and 19 have been amended above to depend on new claim 39. Consequently, Brooks and Maron do not render claims 2 and 19 obvious for at least the reason that Brooks and Maron do not teach or suggest a switching device as required by claim 39. The claimed switching device includes a first switch and a second switch which are connected in parallel with each other, the first switch comprising at least one of an ignition switch of an automotive vehicle, and a switch which is turned on and off in response to an operation of the ignition switch. The second switch is turned on and off in response to an operation of a brake operating member. The switching device is turned on for connecting an electric power source device to a brake, in response to either one of the operations of the ignition switch and the brake operating member.

Brooks discloses an entirely different arrangement, as discussed above in connection with claim 5. Maron is clearly silent as to the claimed structure. Accordingly, claims 2 and 19 are allowable over Brooks and Maron, and therefore withdrawal of the rejection of claims 2 and 19 as unpatentable over Brooks and Maron is respectfully requested.

Claims 3, 4, 18, 21, 22 and 3 were also rejected under 35 USC 103(a) as unpatentable over Brooks and Maron. However, claims 3, 4, 18, 21 and 22 have also been amended above to depend on new claim 39, and consequently are

allowable over Brooks and Maron for at least the reasons discussed in connection with claims 2 and 19. Claim 33 depends on claim 5 and thus is allowable over Brooks for at least the reasons discussed above. Maron does not remedy the deficiencies in Brooks with respect to claim 5. Therefore, claim 33 is allowable over the combination of Brooks and Maron. Accordingly, withdrawal of the rejection of claims 3, 4, 18, 21, 22 and 33 as unpatentable over Brooks and Maron is respectfully requested.


Along similar lines, claims 6-12, 23 and 29 have been rejected under 35 USC 103(a) as unpatentable over Brooks, variously combined with Imanaka (US 4,651,071), JP 5-158742, and Maron. However, claims 6-12, 23 and 29 have each been amended to depend on new claim 39 and, as demonstrated above, Brooks does not teach or suggest the limitations of claim 29. Moreover, none of the secondary references combined with Brooks remedies the deficiencies in Brooks with respect to claim 39. Accordingly, withdrawal of the rejection of claims 6-12, 23 and 29 under 35 USC 103(a) is respectfully requested.

In view of the above discussion, the applicant respectfully submits that the present application is in all aspects in allowable condition, and solicits favorable consideration and early issuance of a Notice of Allowance.

The Examiner is invited to contact the undersigned at (202) 220-4323 to discuss any matter concerning this application. The Office is authorized to charge any fees under 37 C.F.R. 1.16 or 1.17 related to this communication to Deposit Account No. 11-0600.

Respectfully submitted,

Dated: 1/31/03

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VERSION OF AMENDMENTS MARKED UP TO SHOW CHANGES MADE

2. (Third Time Amended) An electrically controlled braking system according to claim [5] 39, wherein said electrically controlled brake includes a rotor for rotating with said wheel, a friction member, and an electric motor for forcing said friction member onto said rotor, and said brake control apparatus includes a motor control device for controlling the electric energy to be supplied from said electric power source device to said electric motor.

3. (Third Time Amended) An electrically controlled braking system according to claim [5] 39, wherein said electrically controlled brake includes a rotor for rotating with said wheel, a friction member, and an electrically operated actuator for forcing said friction member onto said rotor, said switching device is disposed between said electric power source device and said actuator.

4. (Third Time Amended) An electrically controlled braking system according to claim [5] 39, wherein said electrically controlled brake includes a rotor for rotating with said wheel, a friction member, and an electrically operated actuator for forcing said friction member onto said rotor, said braking system further comprising another switching device disposed between said electric power source device and said actuator, said another switching device being turned on to connect said electric power source device to said actuator in response to an operation of said brake operating member.

5. (Third Time Amended) An electrically controlled braking system including an electrically controlled brake for braking a wheel of an automotive vehicle, an electric power source device, a brake operating member, and a brake control apparatus for controlling an electric energy to be supplied from said electric power source device to said brake, for thereby controlling an operation of said brake, when said brake operating member is operated, said braking system comprising:

a switching device disposed between said electric power source device, and at least one of said brake control apparatus and said brake, said switching device being turned on for connecting said electric power source device to said at least one of said brake control apparatus and said brake, in response to an operation of said brake operating member,

wherein said switching device includes a plurality of switches which are connected in series with each other and which are turned on [commonly] in response to the operation of said brake operating member that is common to said plurality of switches.

6. (Twice Amended) An electrically controlled braking system according to claim [5] 39, wherein said brake control apparatus includes a plurality of control devices each of which is principally constituted by a computer, and said electric power source device includes a plurality of electric power sources corresponding to said plurality of control devices, respectively.

11. (Twice Amended) An electrically controlled braking system according to claim [5] 39, wherein said brake control apparatus includes at least three control devices each of which is principally constituted by a computer.

12. (Twice Amended) An electrically controlled braking system according to claim [5] 39, wherein said brake control apparatus includes at least one control device each of which is principally constituted by a computer, and said electric power source device includes a plurality of electric power sources which are arranged to supply electric energies to each of said at least one control device independently of each other.

18. (Third Time Amended) An electrically controlled braking system according to claim [5] 39, wherein said electrically controlled brake includes an electrically operated front brake actuator for forcing a friction member onto a rotor rotating with a front wheel, and an electrically operated rear brake actuator for

forcing a friction member onto a rotor for rotating with a rear wheel, and said electric power source device includes a front brake power source for supplying an electric energy to said electrically operated front brake actuator and a rear brake power source for supplying an electric energy to said electrically operated rear brake actuator.

19. (Third Time Amended) An electrically controlled braking system according to claim [5] 39, wherein said electrically controlled brake includes a plurality of brakes for braking respective wheels of the automotive vehicle, said brakes including respective electrically operated electric motors each of which is arranged to force a friction member onto a rotor for rotating with a corresponding one of the wheels, said braking system further comprising a plurality of actuator switching devices each of which is disposed between said electric power source device and a corresponding one of said electric motors, each of said actuator switching devices being operable between a connecting state for connecting said electric power source device to the corresponding electric motor, and a disconnecting state for disconnecting said electric power source device from said corresponding electric motor.

21. (Third Time Amended) An electrically controlled braking system according to claim [5] 39, wherein said electrically controlled brake includes a rotor for rotating with said wheel, a friction member, and an electrically operated actuator for forcing said friction member onto said rotor, and said brake control apparatus includes a main control device which determines a physical quantity relating to a desired value of a braking force to be produced by said brake and generates a control command representative of the determined physical quantity, and an actuator control device which controls said electrically operated actuator according to said control command and generates a signal representative of a physical quantity relating to an actual value of the braking force produced by said brake.

29. (Twice Amended) An electrically controlled brake system according to claim [5] 39, further including a mechanically operated brake mechanically operated by said brake operating member, and wherein said brake control apparatus includes a switching mechanism operable between a connecting state in which an operating force applied to said brake operating member upon operation of said brake operating member is transmitted to said mechanically operated brake and a disconnecting state in which said operating force is not transmitted to said mechanically operated brake, said brake control apparatus further including a switching control device which is normally placed in said disconnecting state, and is brought into said connecting state when an electrical abnormality of the electrically braking system takes place.